

WHAT IS CLAIMED IS:

- 1 1. Apparatus for cleaning particulate material from a
2 moving web in an electrostatic printer/copier comprising:
 - 3 (a) a web-cleaning cartridge having a web-cleaning
4 component adapted to contact a surface of a moving web and to
5 remove particles therefrom; and
6 (b) a support bracket/backup shoe assembly for
7 selectively positioning said web-cleaning cartridge in a web-
8 cleaning position in which said web-cleaning component
9 pressingly engages said surface, said support bracket/backup
10 shoe assembly comprising (i) a bracket housing for releasably
11 supporting said web-cleaning cartridge, and (ii) a backup shoe
12 assembly having a hard surface adapted to contact the web
13 surface opposite that contacted by said web-cleaning component
14 and to resist the force exerted by said web-cleaning component,
15 said backup shoe being mounted at a fixed location along said
16 path, and said bracket housing being pivotally mounted on said
17 backup shoe for movement between an operative position in
18 which said web-cleaning component exerts a substantially
19 uniform pressure on said web, and a service position in which
20 said web-cleaning cartridge is sufficiently spaced from the web
21 to enable the removal of said web-cleaning cartridge from said
22 bracket housing.
- 1 2. The apparatus as defined by claim 1 wherein said bracket
2 housing defines a cavity for receiving said web-cleaning cartridge,
3 said cavity having features that cooperate with features on said web-

4 cleaning cartridge to assure a desired orientation of said web-cleaning
5 cartridge in said cavity.

1 3. The apparatus as defined by claim 1 wherein said hard
2 surface comprises a wear-resistant and electrically conductive plate.

1 4. The apparatus as defined by claim 1 wherein backup shoe
2 assembly comprises a flange member having a slot formed therein for
3 releasably receiving a mounting feature on said bracket housing that
4 provides a pivotal connection between said bracket member and said
5 backup shoe assembly.

1 5. The apparatus as defined by claim 4 further comprising
2 means for limiting the pivotal movement between said bracket
3 housing and said backup shoe assembly.

1 6. The apparatus as defined by claim 4 wherein said
2 mounting feature is adapted to be readily removed from said slot to
3 enable said bracket housing and a web-cleaning cartridge supported
4 thereby to be de-coupled from said backup shoe assembly.

1 7. Apparatus for releasably supporting a replaceable web-
2 cleaning cartridge in a web-utilization device for movement between
3 an operative position in which one or more web-cleaning elements of
4 said cartridge contact a moving web surface and act to remove
5 particulate material from said surface, and a service position in which
6 the cartridge is sufficiently spaced from said web surface to facilitate
7 service and/or replacement of the cartridge, said apparatus comprising:

8 (a) a cartridge-support bracket/backup shoe assembly
9 including (a) a bracket sub-assembly having a frame defining a
10 cavity for releasably receiving and supporting a web-cleaning
11 cartridge;

12 (b) a backup shoe sub-assembly adapted having a hard
13 surface to contact a web surface opposite that contacted by the
14 cleaning element(s) of the web-cleaning cartridge to provide a
15 resistance to pressure exerted on the web by the clean
16 element(s);

17 (c) a first mount for supporting the backup shoe sub-
18 assembly at a fixed location adjacent the path of movement of
19 the web; and

20 (d) a second mount for pivotally connecting an end of
21 the bracket sub-assembly to the backup shoe sub-assembly to
22 enable the cartridge to move between its operative and service
23 positions; and (e) a latch for releasably latching the two sub-
24 assemblies in a position in which the cartridge is in its operative
25 position.

1 8. The apparatus as defined by claim 7 wherein said cavity
2 has features that cooperate with features on said web-cleaning
3 cartridge to assure a desired orientation of said web-cleaning cartridge
4 in said cavity.

1 9. The apparatus as defined by claim 7 wherein said hard
2 surface comprises a wear-resistant and electrically conductive plate.

1 10. The apparatus as defined by claim 7 wherein said second
2 mount comprises a slot/tab assembly which enables the cartridge-
3 supporting bracket to be physically de-coupled from the shoe
4 assembly, thereby facilitating cartridge or web service and/or
5 replacement.